

AUXILIARY LENSES FOR EYEGLASSES

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BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to auxiliary lenses, and more particularly to auxiliary lenses for eyeglasses.

2. Description of the Prior Art

A typical spectacle frame having an attachable one-piece slide-on rim is disclosed in U.S. Pat. No. 4,070,103 to Mecker. In Mecker, a spectacle frame includes a magnetic material secured to the peripheral portion thereof for facilitating attachment of the auxiliary lens rim cover to the spectacle frame. The lens rim cover also includes a magnetic strip for engaging with the magnetic material of the spectacle frame.

Another typical eyeglasses are disclosed in U.S. Pat. No. 5,416,537 to Sadler and comprise first magnetic members secured to the temporal portions of the frames and second magnetic members secured to the corresponding temporal portions of the auxiliary lenses.

In both of the eyeglasses, the auxiliary lenses are simply attached to the frames by magnetic materials and have no supporting members for preventing the auxiliary lenses from moving downward relative to the frames such that the auxiliary lenses may easily move downward relative to the frames and may be easily disengaged from the frames when the users conduct jogging or jumping exercises. In addition, the magnetic materials are embedded in the frames of the primary lenses and of the auxiliary lenses such that the frames should be excavated with four or more cavities for engaging with the magnetic members and such that the strength of the frames is greatly decreased.

The present invention has arisen to mitigate and/or obviate the afore-described disadvantages of the conventional spectacle frames.

SUMMARY OF THE INVENTION

The primary objective of the present invention is to provide auxiliary lenses which may be stably secured and supported on the frames.

In accordance with one aspect of the invention, there is provided an eyeglass device comprising a primary spectacle frame for supporting primary lenses therein, the primary spectacle frame including two side portions each having an extension extended therefrom for pivotally coupling a leg means thereto, the primary spectacle frame including two rear and side portions each having a projection secured thereto, the primary spectacle frame including an upper portion, a pair of first magnetic members secured in the projections respectively, an auxiliary spectacle frame for supporting auxiliary lenses therein, the auxiliary spectacle frame including two side portions each having an arm extended therefrom for extending over and for engaging with the upper portion of the primary spectacle frame, and a pair of second magnetic members secured to the arms respectively for engaging with the first magnetic members of the primary spectacle frame so as to secure the auxiliary spectacle frame to the primary spectacle frame. The arms are engaged with and supported on the upper portion of the primary spectacle frame so as to allow the auxiliary spectacle frame to be stably supported on the primary spectacle frame and so as to prevent the auxiliary spectacle frame from moving downward relative to and so as to prevent the

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auxiliary spectacle frame from being disengaged from the primary spectacle frame.

The projections and the first magnetic members are arranged lower than the upper portion of the primary spectacle frame, the second magnetic members are extended downward toward the projections for hooking on the primary spectacle frame so as to further secure the auxiliary spectacle frame to the primary spectacle frame. The auxiliary spectacle frame may be prevented from disengaging from the primary spectacle frame.

Further objectives and advantages of the present invention will become apparent from a careful reading of a detailed description provided hereinbelow, with appropriate reference to accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGS. 1 and 2 are front views of a spectacle frame and of auxiliary lenses in accordance with the present invention respectively;

FIGS. 3 and 4 are top views of the spectacle frame and of the auxiliary lenses respectively;

FIG. 5 is a front view of the spectacle frame and the auxiliary lenses combination;

FIG. 6 is a top view of the spectacle frame and the auxiliary lenses combination; and

FIG. 7 is a cross sectional view taken along lines 7-7 of FIG. 6,

~~FIG. 8 illustrates another embodiment of a cross sectional view taken along lines 7-7 of FIG. 6.~~

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, and initially to FIGS. 1 to 4, an eyeglass device in accordance with the present invention comprises a primary spectacle frame 10 for supporting primary lenses therein. The primary spectacle frame 10 includes two side portions each having an extension 11 extended rearward therefrom for pivotally coupling leg 12 thereto. The primary spectacle frame 10 includes two projections 13 secured to the rear and side portions thereof for supporting magnetic members 14 therein. An auxiliary spectacle frame 20 is provided for supporting the auxiliary lenses therein and includes two side portions each having an arm 21 extended rearward therefrom for extending over and for engaging with the upper portion of the primary spectacle frame 10 (FIGS. 5 and 6). The auxiliary spectacle frame 20 also includes two magnetic members 22 secured to the arms 21 thereof for engaging with the magnetic members 14 of the primary spectacle frame 10 such that the auxiliary spectacle frame 20 may be stably supported on the primary spectacle frame 10, best shown in FIGS. 5 and 6.

It is to be noted that the arms 21 are engaged with and are supported on the upper portion of the primary spectacle frame 10 such that the auxiliary spectacle frame 20 may be stably supported and secured to the primary spectacle frame 10. The auxiliary spectacle frame 20 will not move downward relative to the primary spectacle frame and will not be easily disengaged from the primary spectacle frame when the users conduct jogging or jumping exercises.

It is further to be noted that the projections 13 and the magnetic members 14 are secured to the primary spectacle frame 10 and the magnetic members 22 are secured in the arms 21. The magnetic members 14, 22 are not embedded in the frames 10, 20 such that the frames 10, 20 are not required to be formed with cavities therein and such that the strength of the frames 10, 20 will not be decreased.

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Referring next to FIGS 7 and 8, it is preferable that the projec-

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tions 13 and the magnetic members 14 are located slightly lower than the upper portion of the primary spectacle frame 10; and the end portions of the arms 21 and/or the magnetic members 22 are slightly extended downward toward the projections 13 such that the arms 21 and the magnetic members 22 may hook on the primary spectacle frame 10 and such that the auxiliary spectacle frame 20 may further be stably supported and secured to the primary spectacle frame 10.

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In one embodiment, as shown in FIG. 7, magnetic members 14 and 22 are not in contact with each other; magnetic members 14 and 22 are engaged with, but not supported on, each other. Instead, the arm 21 securing the magnetic member 22 is supported on an upper side portion of the primary spectacle frame 10. As shown in FIG. 7, the upper side portion can be an upper part of the side portion securing the projection 13.

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